EFFECTIVENESS OF MINT PASTE ON DYSMENORRHOEA AMONG ADOLESCENT GIRLS AT SELECTED SCHOOLS, SALEM

By

Ms. PRIYA. T

Reg. No: 30109433

A DISSERTATION SUBMITTED TO

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI,

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE

DEGREE OF MASTER OF SCIENCE IN NURSING

(COMMUNITY HEALTH NURSING)

APRIL - 2012

CERTIFICATE

Certified that this is the bonafide work of **Ms. PRIYA.T,** final year M.Sc. (Nursing) student**,** Sri Gokulam College of Nursing, Salem, submitted in partial fulfilment of the requirement for the Degree of Master of Science in Nursing to The Tamilnadu Dr. M.G.R. Medical University, Chennai, under the Registration No.**30109433.**

College Seal:

Signature: **…….**

Prof.Dr. A. JAYASUDHA, Ph.D (N).,

PRINCIPAL,

SRI GOKULAM COLLEGE OF NURSING,

3/836, PERIYAKALAM,

NEIKKARAPATTI,

SALEM - 636 010.

EFFECTIVENESS OF MINT PASTE ON DYSMENORRHOEA AMONG ADOLESCENT GIRLS AT SELECTED SCHOOLS, SALEM

Approved by the Dissertation Committee on: 14.12..2011

Signature of the Clinical Specialty Guide: ……..……

Mrs. J. KAMINI CHARLES, M.Sc. (N), Ph.D.,

Associate Professor & HOD,

Community Health Nursing,

Sri Gokulam College of Nursing,

Salem - 636 010.

Signature of Medical Expert: **……..**

Dr. P. CHELLAMMAL, M.D., DGO,

Consultant Obstetrician and Gynecologist,

Sri Gokulam Hospital,

Salem-636 010.

…… **……...**

Signature of the Internal Examiner with date

Signature of the External Examiner with date

ACKNOWLEDGEMENT

First of all, I would like to say thanks to **God Almighty**, for giving me the strength and health to do this research study. He is the source and inspiration in every walk of my life and the foundation of knowledge and wisdom.

I wish to express my deep sense of gratitude and thanks to **Dr.K.Arthanari,M.S.,** Managing Trustee, Sri Gokulam College of Nursing for the facilities he had provided in the institution which enabled me to do this study.

I express my sincere thanks to **Dr.P.Chellammal, M.D, D.G.O,** Consultant Obstetrician and Gynecologist, Sri Gokulam Hospital, Salem for her professional guidance and support throughout the study.

I express my sincere gratitude thanks to **Dr.A.Akila, M.S (OG).,** Consultant Obstetrician and Gynecologist, Sri Gokulam Hospital, Salem for his professional guidance and support throughout the study.

It is my privilege to express the deepest sense of gratitude and thanks to **Prof.Dr.A.Jayasudha,Ph.D(N).,** Principal, Sri Gokulam College of Nursing, for her valuable suggestionsand immense directions for conducting my study in a successful way.

I would like to extend my heartfelt thanks to **Prof.Dr. K.Tamizharasi,Ph.D(N).,** Vice Principal, Sri Gokulam College of Nursing, for her full support throughout this study.

I proudly convey my deep indebtedness to my guide **Mrs. J.Kamini Charles, MSc.(N) Ph.D.,** Associate Professor and HOD of Community Health Nursing Department, Sri Gokulam College of Nursing, for her excellent suggestions, valuable guidance, kind support, ever willing help from time to time, untiring and patient correction which helped me to bring this study a flourishing one.

I widen my genuine gratitude to the **Dissertation Committee** for offering constructive criticism and due sanction for carrying out this research study.

I am obliged to the **Medical** and **Nursing Experts** for validating the tool and content used in this study.

I broaden my honest recognition to all the faculty members of Community Health Department **Mrs.S.Rajeswari, M.Sc(N)., Mrs.G.Jayanthi,M.Sc.(N)., Ms.D.Akila, M.Sc.(N).,** and **Mrs.A. Ramya, M.Sc.(N).,**lecturer for their help and support throughout my study and also I extend my thanks to all the **Faculty Members** of Sri Gokulam College of Nursing, Salem.

I extend my sincere gratitude to my class coordinator **Mrs.P.Lalitha, M.Sc(N),** Professor and HOD of Mental Health Nursing Department, Sri Gokulam College of Nursing,salem for her constant support and valuable guidance towards this study.

I wish to communicate my extraordinary credit to **Dr. S.Shiva Kumar, M.Sc., M.Phil., Ph.D.,** Biostatistician for his well-timed and opportune aid and backing in statistical analysis and presentation of data.

I am delighted to convey my earnest gratefulness to the librarian, **Mr.P.Jayasheelan, M.Sc.,** for his helping hands in providing all needed literature to complete this research study.

My sincere thanks to all the **Subjects** who took part in this study, without them the study would not have been a successful one. My special thanks to **Headmaster** and all the **Staff Members** of Govt.Girls Hr.Sec.School, Kondalampatti, and Govt.Hr.Sec.School, Mettupatti, Salem for their kind cooperation towards this research study.

I extent my warmest thanks to **Mr.V.Murugesan,** Shri Krishna computers who has helped me to print this dissertation with technical perfection and a complete success.

My truthful praise to all the subjects who took part in this study, without their cooperation and mutual aid, the study would not have been possible.

I express my heartiest gratitude to my family members for their strong support and encouragement throughout my carrier, I wish to thank my brother **Mr.M.P.DeivaKumar, M.E,** for his whole hearted cooperation during this course.

I articulate my hearty appreciation to my parents **Mr.B.Thandavarayan** and **Mrs.T.Sivagami** for helping me to complete this research study successfully.

Sincere thanks to my friends **Ms.P.Sasikala, Ms.Bindya Viswambaram, Ms.A.P.Manimegalai, Ms.Jayanthi Rani.T, Ms.J.Saraswathi, Ms.F.Roselin Devamani, and Mrs.S.Rajeswari** for their help offered throughout this study.

Last but not the least, I express thanks to all other friends who encouraged and supported me to complete the study fruitfully.

TABLE OF CONTENTS

CHAPTER	CONTENT	PAGE NO.
I	**INTRODUCTION**	**1-9**
	➢ Need for the Study	3
	➢ Statement of the Problem	4
	➢ Objectives	4
	➢ Operational Definitions	5
	➢ Assumptions	6
	➢ Hypotheses	6
	➢ Delimitations	6
	➢ Projected Outcome	6
	➢ Conceptual Framework	6
II	**REVIEW OF LITERATURE**	**10-18**
	➢ Literature related to dysmenorrhoea	10
	➢ Literature related to non pharmacological measure for dysmenorrhoea	14
	➢ Literature related to mint paste	17
III	**METHODOLOGY**	**19-26**
	➢ Research Approach	19
	➢ Research Design	19
	➢ Population	21
	➢ Description of the Setting	21
	➢ Sampling	21
	➢ Variables	22
	➢ Description of the Tool	22
	➢ Validity and Reliability	23
	➢ Pilot Study	24
	➢ Method of Data Collection	24
	➢ Plan for Data analysis	25
IV	**DATA ANALYSIS AND INTERPRETATION**	**27-38**
V	**DISCUSSION**	**39-41**
VI	**SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS**	**42-46**
	BIBLIOGRAPHY	**47-53**
	ANNEXURES	

LIST OF TABLES

TABLE NO.	TITLE	PAGE NO.
4.1	Frequency and percentage distribution of samples with dysmenorrhoea according to their Biographic variables in experimental and control group	29
4.2.	Frequency and percentage distribution of samples with dysmenorrhoea according to their Menstruation related variables in experimental and control group	30
4.3.	Frequency and percentage distribution of samples according to pre and post test level of dysmenorrhoea in experimental and control group	34
4.4	Mean, standard deviation and mean difference on dysmenorrhoea among samples in experimental and control group	35
4.5	Mean, Standard deviation and 't' value of post test on dysmenorrhoea among samples in experimental and control group.	36
4.6	Chi-square test on pretest level of dysmenorrhoea among samples with their selected demographic variables in experimental and control group.	37
4.7	Chi-square test on the pre test level of dysmenorrhoea among samples with their selected menstrual related variables in experimental and control group.	38

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE NO.
1.1	Conceptual Framework Based on Modified Rosenstoch's Health Belief Model (1974)	8
3.1	Schematic Representation of Research Methodology	20
4.1	Percentage distribution of samples according to their pretest level of dysmenorrhoea among samples in experimental and control group.	32
4.2	Percentage distribution of samples according to their post test level of dysmenorrhoea among samples in experimental and control group	33

LIST OF ANNEXURES

ANNEXURE	TITLE	PAGE NO
A	Letter seeking permission to conduct a research study	i
B	Letter granting permission to conduct a research study	ii
C	Letter requesting opinion and suggestions of experts for content validity of the research tools	iii
D	Tool for Data Collection	iv
E	Certificate of Validation	xii
F	Certificate of Editing	xiii
G	List of Experts for Content Validity	xiv
H	Photos	xv

ABSTRACT

A Study To Assess The Effectiveness Of Mint Paste On Dysmenorrhoea Among Adolescent Girls At Selected School, Salem.

A Quantitative evaluative approach with quasi experimental research design was used. 60 samples were selected by non probability convenience sampling technique 30 adolescents girls with dysmenorrhoea from Govt.Girls Hr.Sec. School, Kondalampatti as experimental group and 30 adolescent girls with dysmenorrhoea from Govt.Hr.Sec.School, Mettupatti, Salem as control group. The data were collected by Dysmenorrhoea Rating Scale and Structured Interview Schedule. After the pre test 5 grams of mint paste was given for the period of seven days (4 days prior to menstruation and continued till 3 days during menstruation) to the 30 samples in experimental group. Post test was done on 7^{th} day for the both experimental and control group. During pre test in experimental group 19(63.33%) had moderate level of dysmenorrhoea and 11(36.67%) had severe level of dysmenorrhoea. In control group 9 (30%) had moderate level of dysmenorrhoea, 21(70%) had severe level of dysmenorrhoea. During post test in experimental group 19(63.33%) had mild level of dysmenorrhoea and 11(36.37%) had moderate level of dysmenorrhoea and in control group 12(40%) had moderate level of dysmenorrhoea and 18(60%) had severe level of dysmenorrhoea. In experimental group the pre test score on dysmenorrhoea was 23.67±7.25, post test mean score was 15.03±4.93, with a difference of 8.63. In control group, the pre test mean score was 27.93±5.92 and post test mean score was 27.00±5.58 with a difference of 0.93 which shows that mint paste was effective on reducing dysmenorrhoea. The ‘t’ value on dysmenorrhoea was 8.80 at $P<0.05$ level. Hence the formulated hypothesis H_1 was retained. There was no significant association found between the level of dysmenorrhoea and their selected demographic variables. Hence the formulated hypothesis H_2 was rejected. Hence mint is the safest and cheapest method of alternative medicine in the management of dysmenorrhoea.

CHAPTER – I

INTRODUCTION

The word adolescent is derived from the Latin word 'adolescere', which means to grow into maturity. It is transition of an individual from childhood to adulthood. The WHO define adolescent as individual between 10 to 19 years of age whereas youth refers to period between 15-24 years age group. The number of adolescents account for about 10% of all births world wide. **(WHO)**

There are 1.2 billion adolescents aged 10-19 in developing nations making up $1/5^{th}$ to $1/4^{th}$ of country's populations. The total population of India is over 1081 million and is the second most populous country in the world. Adolescents (10-19 years) form a large section of population, about 22.5 percent that, is about 225 million. They have diverse health needs as they are living in diverse circumstances. The total population of young people (10-24 years) is approximately 331 million comprising nearly 30 percent of the total population of India. (**Piyush gupta, 2001)**

Adolescence is a transition period from childhood to adulthood and is characterized by a spurt in physical, endocrinal, emotional and mental growth, with a change from complete dependence to relative independence. The period of adolescence for a girl is a period of physical and psychological preparation for safe motherhood. As the direct reproducers of future generations, the health of adolescent girls influences not only their own health, but also the health of the future population. Almost a quarter of India's population comprises of girls below 20 years.

One of the major physiological changes that take place in adolescent girls is the onset of menarche, which is often associated with problems of irregular menstruation, excessive bleeding, and dysmenorrhoea of these, dysmenorrhoea is one of the common problems experienced by many adolescent girls.

A study done in Sweden showed that more than 50% of all menstruating women experience some discomfort. It has also been reported by a senior obstetrician that probably 5-10% of girls in their late teens suffer from severe spasmodic dysmenorrhoea interrupting their educational and social life.

The true incidence and prevalence of dysmenorrhoea are not clearly established in India. In recent times, George and Bhaduri, concluded that dysmenorrhoea (87.87%) is a common problem in India. In Sweden the prevalence was >2 – 4%. Similar findings had been reported by Jayashree and Jayalakshmi, in rural married women of Andhra Pradesh. Dysmenorrhoea has been estimated to be the greatest cause of time lost from work and school in the United States.

A study was conducted to assess the prevalence of dysmenorrhoea among adolescent girls residing at Gwalior. 970 girls were selected using multistage cluster sampling technique. A semi structured dysmenorrhoea status questionnaire with a total of 14 items were used. It was found that 698(79.6%) of girls had experienced dysmenorrhoea. Most of them, that is 37.96% experienced dysmenorrhoea every month. The three most common symptoms present on both days, that is day before and first day of menstruation were lethargy and tiredness (first), depression (second) and inability to concentrate in work (third), whereas the ranking of these symptoms on the day after the stoppage of menstruation showed depression as the first common symptoms. Negative correlation had found between dysmenorrhoea and the General health status as measured by the body surface area**. (Anil.K.Agarwal, Anju Agarwal, 2010)**

Need for the Study:

Dysmenorrhoea affects 40-90% of women. Despite of its high prevalence, understanding of its pathophysiology and its relation to other pain syndromes in women is still limited. Dysmenorrhoea has been historically categorized into two distinct types- primary and secondary dysmenorrhoea. Primary dysmenorrhoea is the menstrual pain without pelvic pathology and the onset is typically just before menstruation. Secondary dysmenorrhoea occurs when underlying pathology is identified. Its onset may be years after menarche. Pain may start 1 – 2 weeks before menstruation and persists for several days. **(Sophy Shay, 2007)**

A Swedish study analyzing absenteeism due to dysmenorrhoea in young women found that one third to one half missed school or work at least once, and 5 14% were absent more frequently. A community- based survey of women in the United Kingdom found dysmenorrhoea to be closely related to chronic daily pain, with 80% of women with chronic pelvic pain reporting dysmenorrhoea. **(Frank, 2007)**

The prevalence of dysmenorrhoea among adolescent females ranges from 60 to 93%. Many adolescent report limitations on daily activities, such as missing school sporting events and other social activities, because of dysmenorrhoea. However only 15% of females seek medical advice for menstrual pain, signifying the importance of screening all adolescent females for dysmenorrhoea. **(Chanlay Banikarim, 2011)**

Menstrual cramps experienced by a woman during her monthly menstrual period are pains that occur in the abdomen and pelvic area. To some extent 50% of all women are affected by menstrual cramps and approximately 15% of these women have severe cramps. 90% of girls still in their adolescence have cramps. **(Dr.Vijaya, 2011)**

Mint is a popular green leafy vegetable used in cooking for taste and for its aromatic properties. It is also used to make chatni. It is commonly called as Pudina. It is a perennial herb which is propagated by root cutting transplantation. Mint has been used in medicine since last 2000 years. There are over 30 mints in the mint family and each one of them is used in preparation of the medicines. But spearmint and peppermint is generally used in the preparation of medicine. Peppermint is stronger of the two and is widely used in preparation of many medicines. Spear mint is generally used in the preparation of medicines used for alleviating colic in babies because peppermint will fall heavy on their delicate stomach.

Julia, (2011) reported that most women have dysmenorrhoea or menstrual cramps that can sometimes hamper their efficiency and create deep distress. While menstrual cramps are very common before or after the onset of periods, for some women dysmenorrhoea can be unbearable and hence difficult to live with. Mint tea can be used for curing dysmenorrhoea. Mint tea can be had twice or thrice a day for best results. The cooling properties of this herb helps to relieve pain and tension associated with dysmenorrhoea. She also suggests to use mint candy for day long relief.

Mint has an antispasmodic effect and has a good medicinal value. Hence, the investigator felt there is a need to conduct the study on effectiveness of mint paste on dysmenorrhoea among adolescent girls.

Statement of the Problem:

A Study To Assess The Effectiveness Of Mint Paste On Dysmenorrhoea Among Adolescent Girls At Selected Schools, Salem.

Objectives:

1. To assess the level of dysmenorrhoea among adolescents girls in experimental group and control group.
2. To assess the effectiveness of mint paste on dysmenorrhoea among adolescence girls in experimental group.
3. To associate the pretest level of dysmenorrhoea among adolescent girls with their selected demographic variables in experimental and control group.

Operational Definitions:

Assess:

To judge the effect of mint paste on dysmenorrhoea among adolescent girls using dysmenorrhoea rating scale.

Effectiveness:

It is the outcome of the mint paste on dysmenorrhoea among adolescent girls in experimental group.

Mint paste:

It refers to the mint leaves that are taken from the low growing plant, dried under shadow and powdered. 5gm of mint powder along with 1 pinch of pure salt and one bit of seedless tamarind which all are mixed together in a shape of small ball which is to be administered twice a day for 7 days (4 days prior to menstrual period and continued till 3 days during menstruation).

Dysmenorrhoea:

In this study, dysmenorrhoea refers to the verbal response of adolescent girls regarding discomfort such as spasmodic lower abdominal pain and other physiological symptoms such as vomiting, fatigue, headache and body pain which appears few hours before menstruation and last for maximum of 48 hours.

Adolescent girls:

Young girls between the age group of 13 to 18 years.

Assumptions:

1. Most of the adolescent girls may have dysmenorrhoea.
2. Natural adjunct therapy will play an important role on dysmenorrhoea in adolescent girls.
3. Adolescent girls may have some knowledge regarding mint paste on dysmenorrhoea.

Hypotheses:

H_1: There will be a significant difference between the pretest and post test level of dysmenorrhoea among adolescent girls after administration of mint paste in experimental group at $p<0.05$ level.

H_2: There will be a significant association between the pre test level of dysmenorrhoea among adolescent girls and their selected demographic variables in experimental and control group at $p<0.05$ level.

Delimitations:

1. This study was limited to adolescent girls.
2. The data collection period was limited to 4 weeks.
3. Sample size was limited to 60 subjects.

Projected Outcome:

This study would evaluate the effectiveness of mint paste on the level of dysmenorrhoea in adolescent girls. Findings of this study would help the adolescent girls to practice the intake of mint paste to reduce dysmenorrhoea.

Conceptual Framework:

The conceptual framework was selected for the study is based on Rosentoch's Health Belief Model (1974). This model explains how individual perception cues to action and demographic variables develop the perception of threat in individual which encourage them to adopt certain measures to overcome that problem or threat.

Individual perception:

Adolescent girls feels uncomfortable with dysmenorrhoea and that is affecting their daily routine activity.

Identifying factors:

Modifying factors focuses on demographic variable such as age, religion, education, age at menarche, No.of days of menstrual flow, duration of pain and type of pain.

Likelihood of action:

The likelihood of action that a person will take an action involves the person's perception of the benefits of taking action. Here the investigator had administered 5gms of mint paste twice a day to the adolescent girls with dysmenorrhoea in experimental group and found that there was significant reduction in the level of dysmenorrhoea. The adolescent girls also expressed willingness to continue taking mint paste.

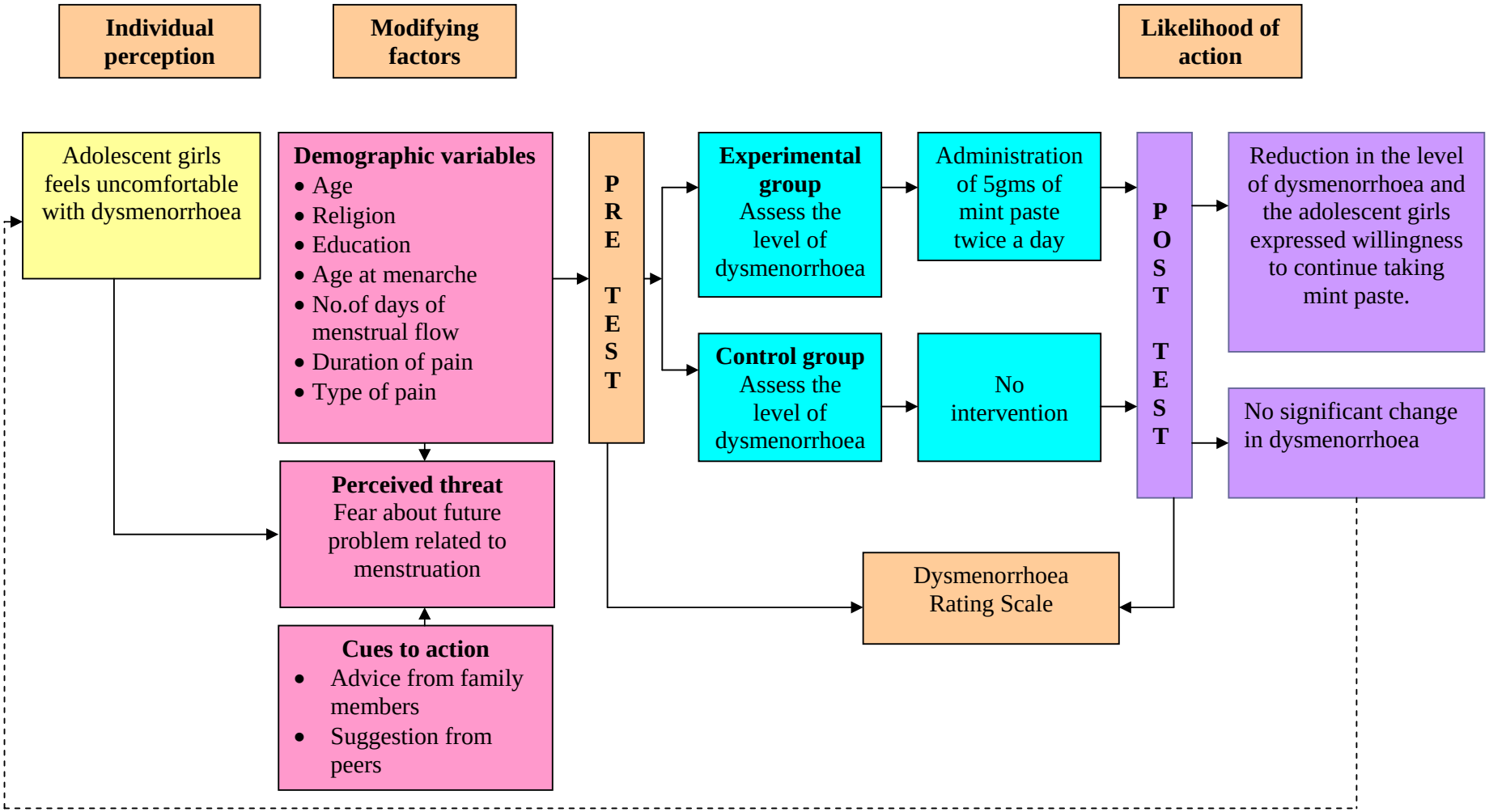

Figure – 1.1: Conceptual Framework Based on Modified Rosenstoch's Health Belief Model (1974)

Summary:

This chapter dealt with introduction, need for the study, statement of the problem, objectives, operational definitions, assumption, delimitation, projected outcome and conceptual framework.

CHAPTER – II

REVIEW OF LITERATURE

Review of literature is an important step in the development of the research study and in broadening the understanding and developing an insight into the problem area. It further help in developing the broad conceptual context, in which the problem fits, methodology, instruction of tool, development of evaluative approach and analysis of data.

The review of literature in this chapter is presented under the following headings,

1. Literature related to dysmenorrhoea.
2. Literature related to non pharmacological measure for dysmenorrhoea.
3. Literature related to mint paste.

1. Literature Related to Dysmenorrhoea:

Ortiz, (2010) conducted a study to evaluate the prevalence, impact and treatment of primary dysmenorrhoea among Mexican University students. A multiple choice questionnaire was administered to 1539 students in six university programs; medicine, nursing, nutrition, dentistry, pharmacy and psychology. The data analyzed revealed that the mean ± SD age of the women was 20.4 ± 2.0 years; the mean age of menarche was 12.3 ± 1.5 years. 64% of the women experienced dysmenorrhoea. 36.1% of women had mild dysmenorrhoea, 43.8% experienced moderate dymenorrhoea and 20.1% experienced severe dysmenorrhoea. Nursing students showed a significantly higher intensity of pain than that of medicine and dentistry students ($p<0.05$). 65% of the women reported that dysmenorrhoea limited their daily activities, and 42.1% reported school absenteeism of those who experienced dysmenorrhoea, 25.9% consulted a physician, and 61.7% practiced self-medications

of those women using prescribed medications, 18.4% reported complete remission of their symptoms, while 78.1% reported little to moderate alleviation, and 3.6% reported no effect on their menstrual distress.

Okusanya, B.O, (2009) conducted a prospective questionnaire based study on prevalence of dysmenorrhoea and associated factors among undergraduates in a Nigerian University. Cluster sampling technique was used. The prevalence of dysmenorrhoea was 76.3%. The mean age at menarche was 13.8 years. Having a sister with dysmenorrhoea had no significant influence on dysmenorrhoea (P=0.76).

Amitha Singh, Dukhukira, et.al, (2008) conducted a cross sectional descriptive study to evaluate the prevalence and severity of dysmenorrhea among 107 medical students residing at SS medical college, Rewa. All participants were given a questionnaire to complete and a verbal multi dimensional scoring system was used. The mean age of subjects at menarche was 12.5 ± 1.52 years with a range of 10-15 years.73.83% of them had dysmenorrhoea. Approximately 4.67% of subjects had severe dysmenorrhoea. The average duration between two periods and the duration of menstrual flow were 28.34±7.54 days and 4.5±2.45 days respectively. Prevalence of other menstrual disorders like inequality, prolonged menstrual bleeding, heavy menstrual bleeding and PCOD were 7.47%, 10.28%, 23.36% and 3.73% respectively. 31.67% of students were frequently missing college due to discomfort. Maximum participants do not seek medical advice and self treat themselves with prostaglandin inhibitors like ibuprofen.

Sr. Dr.Chistina John, (2007) conducted a cross sectional study to assess the common problems related to menstruation faced by adolescent girls. This study was conducted in Chenganoor among 501 school girls of age group between 10-15 years. Out of 338 students, 237(70.1%) had various menstrual problems, the commonest

being dysmenorrhoea and premenstrual syndromes (88.8%). School absenteeism due to menstrual problems was detected up to 23%. The maximum number of dysmenorrhoea is seen in the age group of 14 yrs, (70.9%) and this is statistically significant ($p = 0.02$). fussy eating habits was revealed to have statistically significant connection with late attainment of menarche as detected by low BMI.

V.Patel, V.Tanksale, et.al, (2006) conducted a cross sectional study to describe prevalence of dysmenorrhoea in Goa. 2494 women aged 18-45 years were selected. A Standardized questionairre was used as a tool for collecting the data. The research finding revealed that755 participants experienced moderate to severe dysmenorrhoea. There was a significant association between severity of pain, impact and the onset of pain. (33.4%, 95%, CI 31.4-35.4).

Connell, (2006) conducted a cross sectional study to describe both non-pharmacological treatment used by adolescents with dysmenorrhoea at NewYork. 76 adolescents, aged 19 years or younger with moderate and severe primary dysmenorrhoea were selected. All used nonpharmacological remedies such as sleeping and heat application. Nearly all used atleast one medication, 31% reported using two and 15% used three medications.42% had moderate dysmenorrhoea, 58% had severe dysmenorrhoea associated with nausea is 55% and vomiting is 25%.46% reported missing schools one or more days monthly . Nearly 80% used at least one medication.

Sharma, (2006) conducted study to identify problems related to menstruation and their effect on daily routine among 112 undergraduate medical students residing at Patna. He found that premenstrual syndrome (67%) and dysmenorrhoea (33%) were perceived by the study subject as the most distressing problems associated with

menstruation and results in prolonged resting hours (54%) followed by inability to study (50%).

Romana Dmitrovic, Peter, et.al, (2003) conducted a study on severity of symptoms in primary dysmenorrhoea at university hospital. One hundred and fifty four women were examined with colour Doppler ultrasound. 50 samples were placed in the control group, 60 in the mild and 44 in the severe dysmenorrhoea sub group. The investigator calculated resistance index in uterine arteries in these women on the first day of the cycle, in the follicular (days 9-12) and the luteal (days 20-23) phase of the cycle and used analysis of variance for comparing results. The rate of visualization was for uterine and arcuate arteries, radial arteries and spiral arteries was 100%, 44%, and 62% respectively. A significant difference in Doppler index values among the mild and severe dysmenorrheic group was observed in the luteal phase for the arcuate artery and in all the three measurement periods for the radial and spiral arteries.

(Strinc.T, et.al., 2003) conducted a study in Croatia to examine the prevalence of dysmenorrhoea in female adolescents and the influence of anthropological characteristics and lifestyle factors on menstrual pain. The investigator selected two hundred and ninety seven girls from several elementary and secondary schools and interviewed them on the presence of the menstrual pain their age, height and weight, menarcheal age, menstrual cycles quality, smoking and sexual activity. 164(55%) subjects complainted of dysmenorrhoea while 133(45%) did not experience dysmenorrhoea. 22% of the adolescents missed schools while 96% of subjects had the habit of taking pills.

2. Literature Related to Non Pharmacological Measure for Dysmenorrhoea:

Maryam Kabirian, Zahra Abedian, (2011) conducted a study to determine the effect of evidence based education on dysmenorrhoea girl's self care behaviours and the severity of primary dysmenorrhoea. The study was conducted at Ferdowsi University among 100 girls. The samples were divided into two groups, 50 each in experimental and control group. The experimental group received evidence based education. The results showed that there was significant reduction in pain score at the first (- 0.6 ± 1.7 VS 1.1 ± 2.1, p = 0.000) and second (-1.9 ± 1.5 VS 0.1 ± 1.6 p=0.000) menstrual period after intervention in the experimental group compared with the girls in the control group. There was a significant difference in self care behaviours between the experimental and control group at the second menstrual period after intervention (105.8 ± 8.9 VS 80.4 ± 11.3,) at P=0.021 level. The study concluded that health education system can use evidence based education in order to promote self management behaviours among primary dysmenorrhoeic girls.

Zhongguo Zhen Jiu, (2010) conducted a study in China to observe the efficacy of herbal moxibustion on primary dysmenorrhoea. One hundred and two cases were randomized into isolated herbal moxibustion group and western medication group, 51 cases in each one. The cases in experimental group were treated with isolated herbal moxibustion on Shenque (CV8) and in western medication group, analgesic was given. The results showed that in isolated herbal moxibustion group, 17 cases were cured, and 4 cases failed. The total effective rate was 92.2%. In western medication group, 7 cases were cured and 12 cases failed. The total effective rate was 76.5%. The comparison of the total effective rates between two groups indicated significant difference in statistics ($P < 0.01$), that proves that isolated herbal moxibustion is effective.

Nahid, shahdan, (2009) conducted a double-blind, placebo-controlled study to assess the effectiveness of Iranian herbal drug on primary dysmenorrhea among 180 students at Isfahan university. The participants were divided into three groups. Group I received herbal drug extract three times a day for three days for three cycles. Group II received mefenamic acid capsules group III received placebo tablets. A visual analogue pain scale was used to assess the pain. The results showed that after intervention 20(35%) had no pain in groupI, while in groupII 10(18%) had no pain and in groupIII 2(3.9%) had no pain.the mean pain score of Group I, II, and III were 0.5, 6, and 6 at the end of 3 months which shows that herbal medicine was effective in reducing the severity of dysmennorhoea.

Yang. H, et.al., (2008) conducted a study to assess the effectiveness of acupuncture on primary dysmenorrhoea at Beijing University. 60 students were selected and were randomly assigned to experimental and control group.then results showed that acupuncture was effective in reducing the pain. (Placebo acupuncture WMD = -0.57 and 95% CI = - 0.76 – 0.38; standard control; WMD = - 19 and 95% CI = - 0.37 – 0.01; visitation control WMD = - 1.04 and 95% CI = - 7.28 – 0.80).

Lakshmi, (2007) conducted a preexperimental study on effectiveness of pelvic rocking exercise upon dysmenorrhoea among school girls in Erode District. Thirty one school girls with dysmenorrhoea were selected by the simple random method. Majority of school girls (61.3%) had attained menarche between 10-12 years, 83.9% had duration of 4-5 days of menstrual cycle. 71% did not practice any regular exercise and 83.9% were watching TV and sleeping as a remedy for dysmenorrhoea. Dysmenorrhoea was measured using Visual Analog Scale. There was significant reduction in dysmenorrhoea score at the level of $p<0.05$ ($t = 8.26$).

Giti Ozgoli, (2007) conducted a double blind comparative clinical trial to compare the effects of ginger, mefenamic acid, and ibuprofen on pain among women with primary dysmenorrhoea at Taiwan. 150 students with primary dysmenorrhoea were selected and divided into three equal groups. Samples in the ginger group took 250mg capsules of ginger rhizome powder four times a day for three days from the start of their menstrual period. Samples of the other groups received 250mg mefenamic acid or 400mg ibuprofen capsules, respectively, on the same protocol. A verbal multidimensional scoring system was used for assessing the severity of primary dysmenorrhoea. Post test was done and were compared between the groups after one menstrual cycle. The result shows that there were not significant differences between groups in baseline characteristics at $P<0.05$. 65% of samples who recieved 6 mg of mefenamic had experienced decreased pain intensity when compaired to the other 3 groups. The result concluded that ginger was effective as compared to mefenamic acid and ibuprofen in relieving pain in women with primary dysmenorrhoea.

Svetlana Vladislavovna, et.al., (2007) conducted a double blind randomized clinical trial to assess the efficiency of psidii Guajave folinum extract on primary dysmenorrhea in Mexico.197 women with primary dysmenorrhoea were selected and were divided into four intervention groups. Two extract doses (3 and 6 mg/day) ibuprofen (1200mg/ day), placebo (3mg/ day) participants were followed up individually for 4 months. The visual analogue scale (VAS) was used to assess the pain intensity. The average age of samples was 19 years, menarche occurred around age 12 years. Participants had menstrual cycles, of 28 or 29 days with menstruation lasting for 5 days and mean of pain intensity of 8.2 on the VAS. During each successive treatment cycle, samples experienced a lower pain intensity score. Multiple

regression analysis showed that the group receiving 6mg/day extract had significantly reduced pain intensity (P<0.001).This shows that 6 mg of guava extract was effective in reducing the pain intensity.

(Kariman N, Zaree F, et.al., 2005) conducted a placebo-controlled double blind study determine the effect of Menastil on primary dysmenorrhoea among students of Saveh University.72 students were selected and data was collected through a questionnaire and the McGill pain ruler was used to determine the pain severity. Subjects were classified into two groups of moderate ($4 \leq$ score ≤ 7) and severe ($8 \leq$ score ≤ 10), based on their pain severity. Two drops of Menastil (calendula + mint) was used topically during the menstruation in the form of an abdominal massage for two months for the experimental group. The placebo group received the same mode of treatment with the vials contained baby oil and mint. The menstrual cramp levels were assessed, using a visual analogue scale (McGill Ruler) and severity of dysmenorrhoea was measured. The results showed that compared to placebo, Menastil decreased more the severity of dysmenorrhoea so that the difference between two groups was significant at ($p<0.0001$). Also, the consumption of pain relief agents and the amount of menstrual bleeding was decreased by Menastil therapy.

3. Literature Related to Mint Paste:

Beulah Queen, (2010) conducted a study to assess the effectiveness of mint leave paste on dysmenorrhoea among adolescent girls at selected schools at Kanyakumari district. 34 girls were selected into the experimental group and 16 adolescent girls were selected into control group. Pretest was done using dysmenorrhoea rating scale. Mint leaves paste was administered to experimental group for 4 days before menstruation and 3 days after menstruation. The results showed that the mean difference between the pretest and posttest regarding

dysmenorrheal score was 15.3. The obtained‘t’ value t=9.89($p<0.05$) was significant. The study concluded that the adolescent girls who were taking mint leaves paste had significant reduction in dysmenorrhea.

Ramya. M, (2008) reported a significant reduction in dysmenorrhoea after the administration of mint leave extract among 35 nursing students in Chennai. The pretest level of symptoms of dysmenorrhoea was M=42.14, SD =9.64 and post test level of symptoms of dysmenorrhoea was found to be less M=21.6, SD=4.37. The difference was statistically proven to be significant $P<0.001$ level. The pretest level of dysmenorrhoea was M=6.46, SD =2.57 post test level of dysmenorrhoea was found to be less M=1.2, SD = 1.26. The difference was statistically prevent to be significant $P<0.001$ level. These results could be attributed to the effectiveness of the mint extract.

Spirling, (2001) conducted a study on botanical perspectives on health peppermint. Peppermint is usually taken after a meal for its ability to reduce indigestion and colonic spasms by reducing the gastrocolic reflex. Less well recognized is peppermint’s potential role in the management of numerous other medical conditions including certain procedures. Eg. colonoscopy. With the growing popularity of herbal remedies among both the public and medical practitioners, it would seem that now is an opportune time to consider further what peppermint has to offer the world of medicine.

Summary

This chapter dealt with the review of literature related to dysmenorrhoea and non-pharmacological measure for dysmenorrhoea and mint paste.

CHAPTER – III

METHODOLOGY

The methodology of research indicates the general pattern of organizing the procedure for the gathering valid and reliable data for the purpose of investigation. **(Polit D.F, and Hungler, 2003)**

The present study aims to evaluate the effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected schools, Salem.

Research Approach:

Quantitative evaluative research approach was adopted for this study.

Research Design:

Quasi experimental design involves the manipulation of an independent variable that is an intervention Quasi experimental design lack randomization to treatment group. **(Polit D.F, and Beck, 2004)**

Quasi experimental design pre and post test design was used.

E	**O_1**	**X**	**O_2**
C	**O_1**		**O_2**

E: Experimental group

C: Control group

X: Intervention - mint paste

O_1: Pre-test assessment by using dysmenorrhoea rating scale

O_2: Post-test assessment by using dysmenorrhoea rating scale

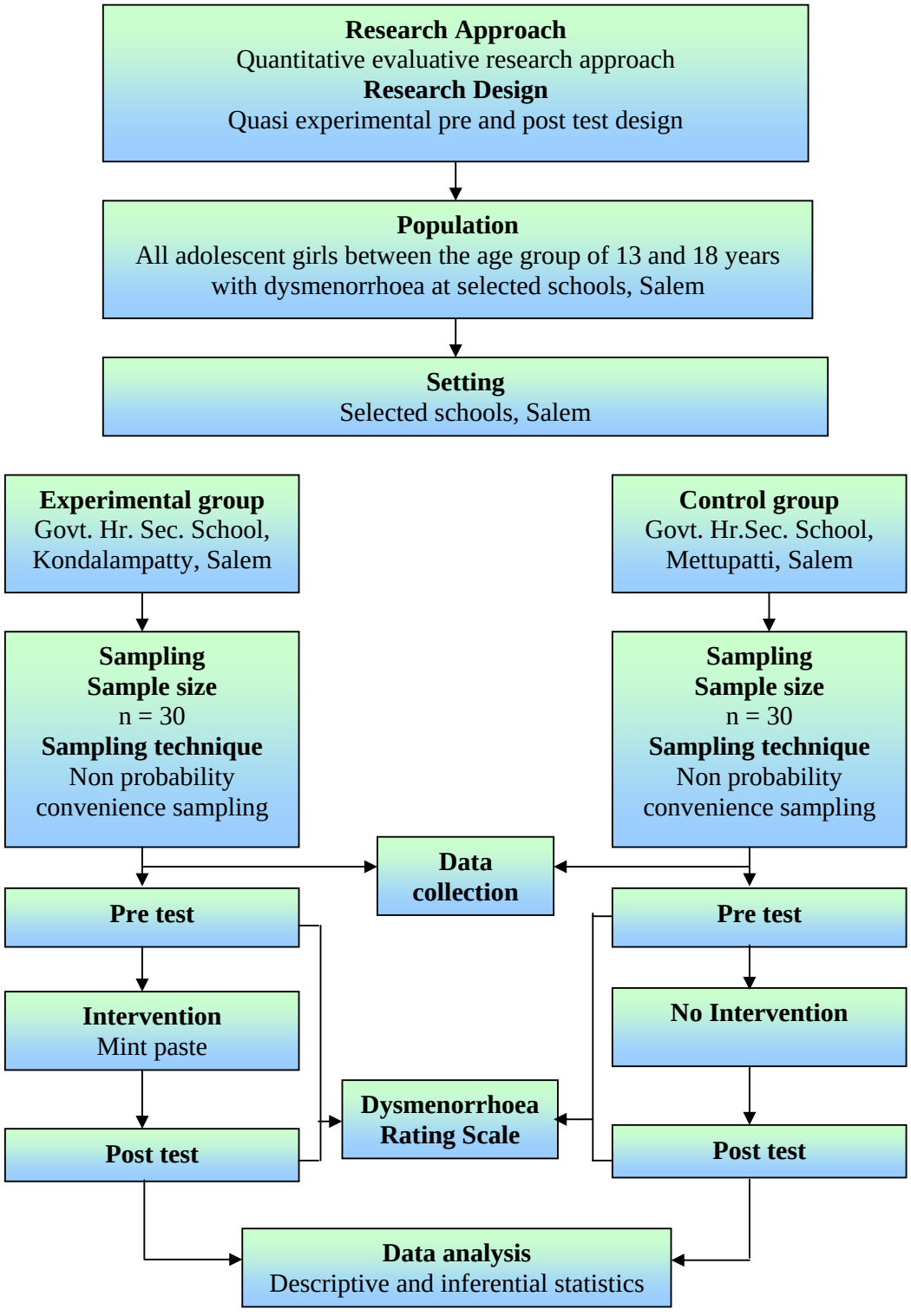

Figure-3.1: Schematic Representation of Research Methodology

Population:

The population for this study comprises of all adolescent girls with dysmenorrhoea between the age group of 13 and 18 years at selected schools, Salem.

Description of settings:

Setting is the general location and condition in which data collection takes place for the study (Polit, D.F and Hungler, 2003). The study was conducted at selected schools, Salem. The samples for the experimental group were selected from Govt.Girls Hr. Sec. School, Kondalampatti, Salem and the samples for the control group were selected from Govt. Hr.Sec. School, Mettupatti, which is 2kms and 16kms away respectively from Sri Gokulam College of Nursing. These areas were selected based on the availability of samples and feasibility in terms of cooperation.

Sampling:

Sampling refers to the process of selecting the portion of population to represent the entire population. **(Polit. D.F, and Hungler, 2003)**

- Sample:

  The samples in this study comprises of all adolescent girls with dysmenorrhoea between the age group of 13 and 18 years at selected schools, Salem.

- Sample size:

  The sample size consists of 60 adolescent girls with dysmenorrhoea who met the inclusion criteria. Among them 30 were in experimental group and 30 in control group.

- Sampling technique:

  Non Probability Convenience sampling technique was adopted for selecting the samples for the study.

- Criteria for Sample Selection:

  Inclusion Criteria:

  Adolescent girls who are,

  1. between the age group of 13 and 18 years.
  2. with regular menstrual cycle and dysmenorrhoea.
  3. willing to participate in the study.
  4. present on the day of data collection

  Exclusion Criteria:

  Adolescent girls

  1. who have any medical illness.
  2. those who take any other remedial measures for dysmenorrhoea.

Variables:

Independent variable: Mint paste

Dependent variable : Dysmenorrhoea

Description of the Tool:

With the investigator's personal and professional experiences and after extensive literature review and discussion with experts the tool was developed for data collection.

It consists of the following sections,

Section-I:

This section consists of demographic data such as age, religion, education status, age at menarche, number of days of menstrual flow, duration of pain and type of pain.

Scoring procedure:

No score was allotted for this section. The data was used only for descriptive analysis.

Section-II:

Dysmenorrhoea rating scale was used to assess the level of dysmenorrhoea.

Level of dysmenorrhoea and score interpretation

Mild	1 – 13
Moderate	14 - 26
Severe	27 - 40

Validity and Reliability of the Tool:

Validity:

Validity is that quality of data gathering instrument or procedure that enables it to measure what it is supposed to measure. **(John W.Best and James V.Khan, 2002)**

Validity of the tool was obtained on the basis of opinion of Medical and Nursing Experts (Two Medical Experts, Five Community Health Nursing Specialists and One Siddha Specialist). The tool was found adequate and then translated into Tamil.

Reliability:

Reliability is a degree to which measures are free from errors so that they give same results when repeat measurements are made under constant. **(Ram Ahuja, 2002)**

Reliability of the tool was checked by test re-test method and the reliability coefficient was $r' = 1$, which showed that the tool was reliable.

Pilot Study:

The pilot study was conducted from 27.06.2011 to 03.07.2011 after the tool presentation and approval by college of nursing faculty and dissertation committee. Validity and reliability of the tool was tested during this time. After getting verbal consent from the samples, the investigator selected 3 adolescent girls with dysmenorrhoea from Govt. Hr. Sec. School, Kottai as experimental group and 3 adolescent girls with dysmenorrhoea from Govt. Hr. Sec. School, Gugai as the control group through Non Probability Convenience Sampling Technique. Then data was collected by using Dysmenorrhoea Rating Scale through structured interview schedule.

A pre test assessment was done both in experimental and control group on 27.06.11. Mint paste was given to the experimental group for a period of seven days (4 days prior to menstruation and continued till 3 days during menstruation).

A post test assessment was done both for experimental and control group on 03.07.11. The tool was administered and checked for its feasibility, language and appropriateness. The samples chosen were similar in the characteristics to those of the population under study. The tool was reliable and the study was found feasible, practicable and helped for further proceedings.

Method of Data Collection:

Ethical consideration:

Written permission was obtained from the Chief Education Officer, Salem. Informed verbal consent was taken from the adolescents girls with dysmenorrhoea who were willing to participate in the study.

Period of data collection:

Data was collected over a period of 4 weeks from 13.07.2011 to 07.08.2011.

Data collection procedure:

The study was conducted at two Government Higher Secondary Schools in Kondalampatti and Mettupatti. The samples of the experimental group were selected from Kondalampatti and the sample of the control group were from Mettupatti. The samples were collected by non-probability convenience sampling technique. The data was collected from the samples by Dysmenorrhoea Rating Scale the samples were then divided into 3 groups based on their menstrual cycle.

The samples in the experimental group were grouped as follows, 12 samples in the 1st group, 10 samples in the 2nd group and 8 samples in the 3rd group. Pre test was done on the first day of administration of mint paste for the 1st group pretest was done on 18.07.11 and mint paste was administered from 18.07.11 to 24.07.11 twice daily for a period of 7 days and post test was done for this group on 24.07.11. Pretest was done for the 2nd group on 23.07.11 and mint paste was administrated from 23.07.11 to 29.07.11 twice daily for a period of 7 days and post test was done for this group on 29.07.11. Pre test was done for the 3rd group on 28.07.11 and mint paste was administered from 28.07.11 to 03.08.11 twice daily for a period of 7 days and post-test was done for this group on 03.08.11.

The samples in the control group there were 13 samples in the 1st group. 10 samples in the 2nd group and 7 samples in the 3rd group. Pre test was done for the 1st group on 19.7.11 and post test was done on 25.07.11. Pretest was done for the 2nd group on 25.07.11 and post test was done on 31.07.11. Pre test was done for the 3rd group on 30.07.11 and post test was done on 05.08.11.

Plan for Data Analysis:

The data will be collected, arranged and tabulated. Descriptive statistics like frequency, percentage, mean, standard deviation and mean difference will be used.

Inferential statistics like independent ‘t’ test will be used to find the effectiveness of mint paste on dysmenorrhoea among adolescent girls and chi-square test will be used to associate the pretest level of dysmenorrhoea among adolescent girls with their selected demographic variables.

Summary:

This chapter consists of research approach, research design, population, description of the setting, sampling, variables, description of the tool, validity and reliability, pilot study, method of data collection and plan for data analysis.

CHAPTER- IV

DATA ANALYSIS AND INTERPRETATION

Research data must be processed and analyzed in an orderly fashion so that patterns and relationship can be discerned validated and hypotheses can be tested. Quantitative data analyzed through statistical analysis includes simple procedures as well as complex and sophisticated methods. **(Polit, 2004)**

The chapter deals with the analysis and interpretation of the data collected from the dysmenorrhoea adolescent girls at selected schools, Salem. The data collected from the subjects were tabulated, analyzed and preserved in the tables and interpreted under the following sections based on the objectives and hypotheses of the study.

Presentation of Data:

This chapter is divided into four sections,

Section -A:

Distribution of samples with dysmenorrhoea according to their selected demographic variables in experimental and control group.

Section-B:

a) Distribution of samples according to their pretest level of dysmenorrhoea in experimental and control group.

Section-C:

a) Distribution of samples according to their post test level of dysmenorrhoea in experimental and control group.
b) Comparison between the pre test and post test level of dysmenorrhoea among samples in experimental and control group.
c) Comparison between the pre test and post test on dysmenorrhoea among samples in experimental and control group.

Section-D: Testing hypotheses

a) Effectiveness of mint paste on dysmenorrhoea among samples in experimental and control group.

b) Association between the pre test level of dysmenorrhoea among samples and their selected demographic variables in experimental and control group.

Section – A

Distribution of samples with dysmenorrhoea according to their selected demographic variables in experimental and control group.

Table-4.1:

Frequency and percentage distribution of samples with dysmenorrhoea according to their Biographic variables in experimental and control group

n=60

S. No	Biographic variables	Experimental group (n = 30)		Control group (n = 30)	
		f	%	f	%
1.	**Age in years**				
	a. 13 – 14	3	10	10	33.33
	b. 15 – 16	16	53.33	6	20
	c. 17 – 18	11	36.67	14	46.67
2.	**Religion**				
	a. Hindu	18	60	23	76.67
	b. Muslim	1	3.33	1	3.33
	c. Christian	11	36.67	6	20
3.	**Educational status**				
	a. 9^{th} std	9	30	18	60
	b. 10^{th} std	10	33.33	5	16.67
	c. 11^{th} std	5	16.67	4	13.33
	d. 12^{th} std	6	20	3	10

The above table shows that in experimental group, 16(53.33%) are between the age group of 15-16 years, and 18(60%) are Hindu, 10(33.33%) are studying 10^{th} standard.

In control group 14(46.67%) are between the age group of 17-18 years and 23(76.67%) are Hindu and 18(60%) are studying 9^{th} standard.

Table-4.2:

Frequency and percentage distribution of samples with dysmenorrhoea according to their Menstruation related variables in experimental and control group

n=60

S. No	Menstruation related variables	Experimental group (n = 30)		Control group (n = 30)	
		f	%	f	%
1.	**Age at menarche (in years)**				
	a. less than 12 year	9	30	9	30
	b. 13 – 14	9	30	12	40
	c. 15 – 16	6	20	6	20
	d. 17 – 18	6	20	3	10
2.	**Duration of menstrual flow per month**				
	a. Less than 3 days	7	23.33	13	43.33
	b. 4 – 5 days	17	56.67	12	40
	c. 6 – 7 days	6	20	5	16.67
3.	**Duration of pain**				
	a. One day before menstruation	2	6.67	6	20
	b. 1st day	10	33.33	9	30
	c. 1st and 2nd day	11	36.77	7	23.33
	d. Throughout the menstruation	7	23.33	8	26.67
4.	**Type of pain**				
	a. Radiating pain	9	30	12	40
	b. Colicky Pain	10	33.33	12	40
	c. Spasmodic pain	11	36.67	6	20

The above table shows that in experimental group 9(30%) of them attained menarche less than 12 years and 9(30%) of them attained menarche in the age 13-14 years and 17(56.67%) of them have 4 – 5 days menstrual cycle and 11(36.7%) have pain during 1st and 2nd day of their menstrual cycle and 11(36%) have Spasmodic pain.

In control group 12(40%) of them attained menarche in the age 13-14 years and 13(43.33%) of them have less than 3 day of menstrual cycles and 12(40%) have radiating pain, 12(40%) have colicky pain during 1st day of their menstrual cycle.

Section – B

a) Distribution of samples according to their pretest level of dysmenorrhoea in experimental and control group.

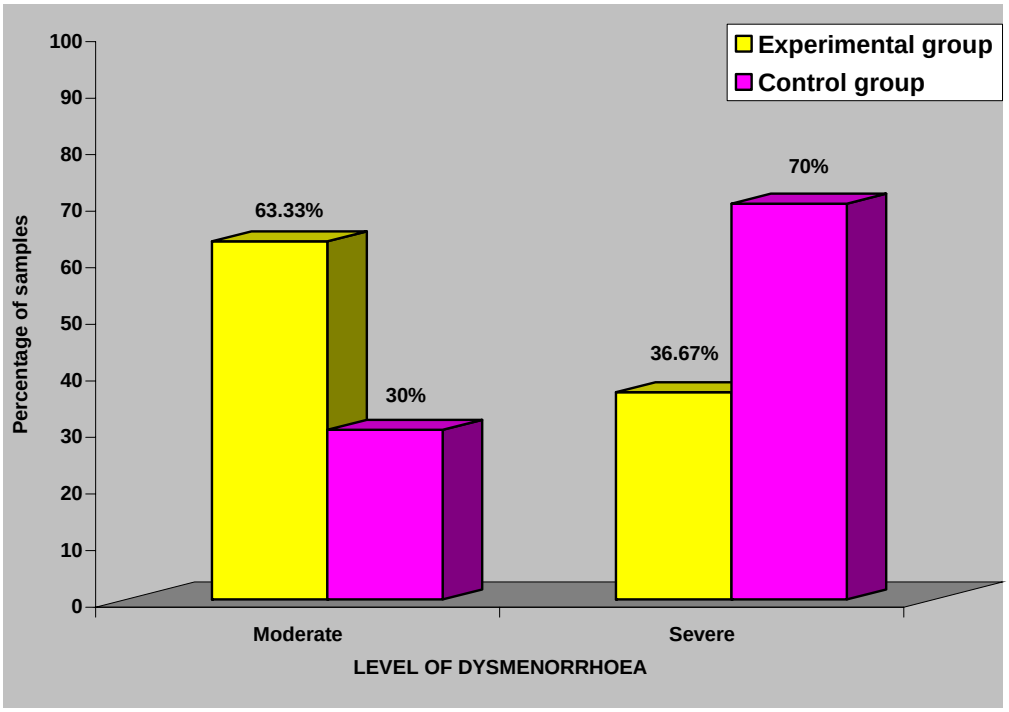

Figure-4.1: Percentage distribution of samples according to their pretest level of dysmenorrhoea among samples in experimental and control group.

The above figure shows in pretest, in experimental group 19(63.33%) belongs to moderate level of dysmenorrhoea and 11(33.33%) belongs to severe level of dysmenorrhoea. In control group 9(30%) belongs to moderate level of dysmenorrhoea and 21(70%) belongs to severe level of dysmenorrhoea.

Section - C

a) Distribution of samples according to their post test level of dysmenorrhoea in experimental and control group.

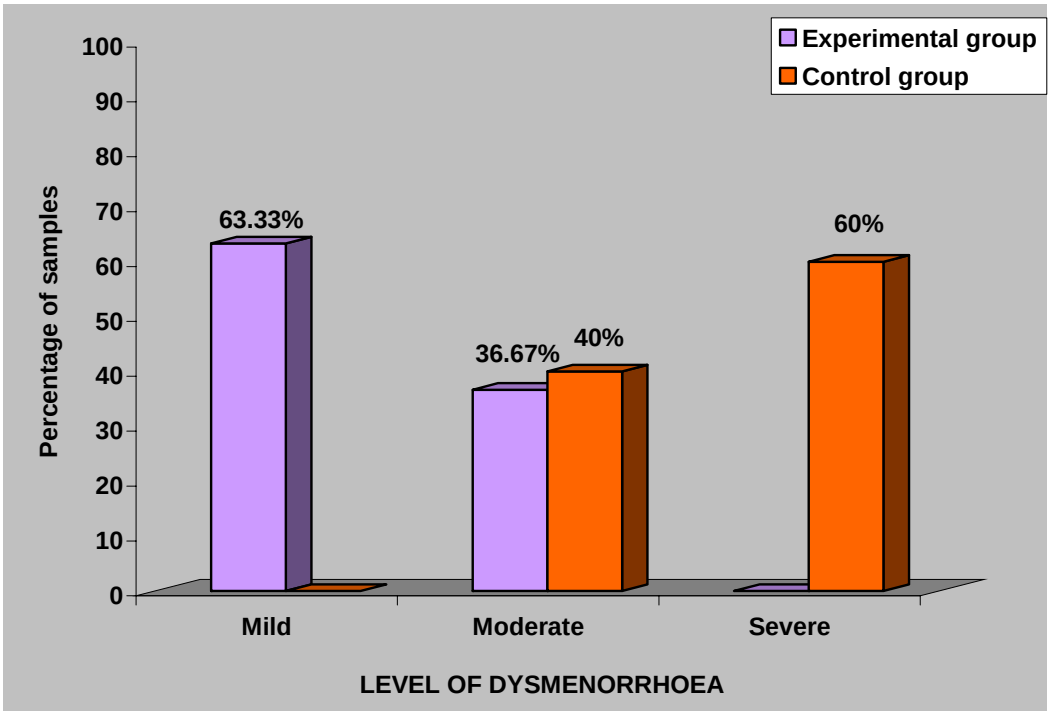

Figure-4.2: Percentage distribution of samples according to their post test level of dysmenorrhoea among samples in experimental and control group.

The above figure shows in post test, in experimental group 19(63.33%) belongs to mild level of dysmenorrhoea, 11(36.67%) belongs to moderate level dysmenorrhoea and none of them belongs to severe level of dysmenorrhoea. In control group 12(40%) belongs to moderate level of dysmenorrhoea and 18(60%) belongs to severe level of dysmenorrhoea.

b) Comparison between the pretest and post test level of dysmenorrhoea among samples in experimental and control group

Table-4.3:

Frequency and percentage distribution of samples according to pre and post test level of dysmenorrhoea in experimental and control group

n=60

S. No	Level of dysmenorrhoea	Experimental group				Control group			
		Pre test		Post test		Pre test		Post test	
		f	%	f	%	f	%	f	%
1	Mild	0	0	19	63.33	0	0	0	0
2	Moderate	19	63.33	11	36.67	9	30	12	40
3	Severe	11	36.67	0	0	21	70	18	60

The above table shows that in pre test, in experimental group 19(63.33%) have moderate level of dysmenorrhoea and 11(36.67%) have severe level of dysmenorrhoea. In control group 9(30%) have moderate level of dysmenorrhoea and 21(70%) have severe level of dysmenorrhoea.

In post test, in experimental group 19(63.33%) have mild level of dysmenorrhoea level and 11(36.37%) have moderate level of dysmenorrhoea and none of them have severe level of dysmenorrhoea. In control group 12(40%) have moderate level of dysmenorrhoea and 18(60%) have severe level of dysmenorrhoea.

c) Comparison between the pre test and post test on dysmenorrhoea among samples in experimental and control group.

Table-4.4:

Mean, standard deviation and mean difference on dysmenorrhoea among samples in experimental and control group

n=60

S. No	Group	Max. Score	Pre test		Post test		Mean difference
			Mean	SD	Mean	SD	
1	Experimental group	40	23.67	7.25	15.03	4.93	8.63
2	Control group		27.93	5.92	27.00	5.58	0.93

The above table shows that, in experimental group, the mean pre test score on dysmenorrhoea is 23.67±7.25, post test mean score is 15.03±4.93, with a difference of 8.63. In the control group, the pre test mean score is 27.93±5.92 and post test mean score is 27.00±5.58 with a difference of 0.93. The mean difference in experimental group shows that mint paste has reduced dysmenorrhoea among adolescent girls in experimental group.

Section – D

Hypothesis Testing

a) Effectiveness of mint paste on dysmenorrhoea among samples in experimental and control group.

Table – 4.5:

Mean, Standard deviation and 't' value of post test on dysmenorrhoea among samples in experimental and control group.

n=60

S. No	Group	Post test		't' value	Table value
		Mean	SD		
1	Experimental Group	15.03	4.93	8.80*	2.00
2	Control group	27.00	5.58		

*** Significant level at (P<0.05)**

The above table shows that in experimental group, the post test mean score of dysmenorrhoea is 15.03±4.93 and in control group the post test mean score is 27.00±5.58. The 't' value is 8.80 which shows that mint paste is effective in reducing the level of dysmenorrhoea among adolescent girls in experimental group. Therefore hypothesis H_1 is retained at P<0.05 level.

b) Association between the pre test level of dysmenorrhea among samples and their selected demographic variables in experimental and control group.

Table-4.6:

Chi-square test on the pre test level of dysmenorrhoea among samples with their selected biographic variables in experimental and control group.

n=60

S. No	Biographic variables	Experimental group (n=30)			Control group (n=30)		
		df	χ^2	Table value	df	χ^2	Table value
1	Age in years	2	0.02	5.99	2	4.49	5.99
2	Religion	2	1.47	5.99	2	3.91	5.99
3	Educational status	3	1.34	7.82	3	0.39	7.82

The above table shows that, in experimental and control group, there is no significant association between the pre test level of dysmenorrhoea and their selected demographic variables. Hence the formulated hypothesis H_2 is rejected at P>0.05 level.

Table-4.7:

Chi-square test on the pre test level of dysmenorrhoea among samples with their selected menstrual related variables in experimental and control group.

n=60

S. No	Menstrual related variables	Experimental group (n=30)			Control group (n=30)		
		df	χ^2	Table value	df	χ^2	Table value
4	Age at menarche (in years)	3	1.77	7.82	3	0.64	7.82
5	No.of days of menstrual flow per month	2	2.99	5.99	2	5.26	5.99
6	Duration of pain	3	1.83	7.82	3	1.84	7.82
7	Type of pain	2	1.57	5.99	2	0.23	5.99

*** Significant level at p<0.05**

The above table shows that, in experimental and control group, there is no significant association between the pre test level of dysmenorrhoea and their selected demographic variables. Hence the formulated hypothesis H_2 is rejected at P>0.05 level.

Summary

This chapter dealt with data analysis and interpretation in the form of statistical values based on the objectives. Here the frequency and percentage were used to distribute the samples according to their demographic variables and to classify them based on the level of dysmenorrhoea. The independent 't' test was used to evaluate the effectiveness of mint paste on dysmenorrhoea. The chi-square test was used to associate the pretest level of dysmenorrhoea with their selected demographic variables.

CHAPTER - V

DISCUSSION

This chapter discusses the findings of the study derived from the descriptive and inferential statistics. This study was conducted to evaluate the effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected schools, Salem.

Description of the demographic variables

The demographic variables were collected through structured interview schedule and dysmenorrhoea was assessed by Dysmenorrhoea Rating Scale. The level of dysmenorrhoea was assessed before and after the administration of mint paste.

- The investigator found that in experimental group 16(53.33%) sample were in the age group of 15-16 years. In control group 14(46.67%) samples were in the age group of 17-18 years. This study was supported by **Abbaspour. Z, (2002)** he did the study to determine the effect of exercise on primary dysmenorrhoea. In this study 150 adolescents were studied and concluded that 15-18 years of adolescent had severe dysmenorrhoea.
- In experimental group 18(60%) were Hindu and in control group 23(76.67%) were Hindu.
- In experimental group 10(33.33%) were studying 10^{th} standard whereas in control group 18(60%) were studying 9^{th} standard.
- In experimental group 9(30%) of them attained menarche at less than 12 years and 9(30%) of them attained menarche in the age of 13-14 years. In control group 12(40%) of them attained menarche at 13-14 years. This was supported by **William Cameron Chumlea, et.al., (2003).** They conducted a study on age at menarche and racial comparisons in US girls less than 10% of girls start

to menstruate before 11 years, and 90% of girls are menstruating by 13.75 years of age with a median age of 12.43 years.

- In experimental group 17(56.67%) of them had 4-5 days menstrual cycle and in control group less than 13(43.33%) of them had 3 days of menstrual cycle. This was supported by **Atchuta, et.al., (2008)** who did a study to find out the difference between perception and management of dysmenorrhoea among rural and urban adolescent girls. They concluded that the mean duration of menstrual flow was 1-5 days.
- In experimental group 11(36.77%) had pain during 1st and 2nd day of their menstrual cycle. In control group 9(30%) had pain during 1st day of their menstrual cycle.
- In experimental group 11(36.77%) had spasmodic pain, in control group 12(40%) had radiating pain, 12(40%) had colicky pain.

The first objective of the study was to assess the level of dysmenorrhoea in the adolescent girls.

During pre test in the experimental group 19(63.33%) samples had moderate level of dysmenorrhoea and 11(36.67%) had severe level of dysmenorrhoea. In control group 9(30%) samples had moderate level of dysmenorrhoea and 21(70%) samples had severe level of dysmenorrhoea.

During Post test, in the experimental group 19(63.33%) samples had mild level of dysmenorrhoea and 11(36.67%) samples had moderate level of dysmenorrhoea. In control group 12(40%) samples had moderate level of dysmenorrhoea, 18(60%) samples had severe level of dysmenorrhoea.

The second objective was to evaluate the effectiveness of mint paste on dysmenorrhoea among adolescent girls in experimental group.

In the experimental group the post test mean score of dysmenorrhoea was 15.03±4.93 and in the control group, the post test mean score was 27.00±5.58. The 't' value was 8.80* which shows that mint paste was effective in reducing dysmenorrhoea among adolescent girls in experimental group at $P<0.05$ level. Hence the formulated research hypothesis H_1 was retained.

Beulah Queen, (2010) conducted a study to assess the effectiveness of mint leaves paste on dysmenorrhoea. The samples were 34 adolescent girls in experimental group and 16 adolescent girls in control group were selected. Pretest was conducted by using Dysmenorrhoea Rating Scale. The obtained 't' value ($t = 9.89$, $P<0.05$) was significant. The adolescent girls who had taken mint leave paste had significant reduction in dysmenorrhoea.

The third objective was to associate the level of dysmenorrhoea among adolescent girls in experimental and control group with their selected demographic variables.

In experimental and control group, there was no significant association between the level of dysmenorrhoea and their selected demographic variables at $P<0.05$ level.

Summary:

This discussion made in their chapter was based on the objectives of the study and its relation with similar studies conducted by other investigator. All the three objectives have been obtained. The first formulated hypothesis was retained and second hypothesis was rejected in this study.

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

In this chapter, summary, conclusion, implications to nursing practice and recommendations for further study all presented.

Summary:

The purpose of this study was to assess the effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected schools, Salem. Quasi experimental pre test post test design was chosen for this study. The conceptual framework selected for the study was based on Modified Rosenstoch's Health Belief Model, (1974). The tool used in this study consisted of two sections.

Section-A: This section consists of demographic data such as age, religion, education, age at menarche, duration of menstrual flow per month, duration of pain and type of pain.

Section-B: A Dysmenorrhoea Rating Scale was used to assess the level of dysmenorrhoea.

The data were analysed using descriptive and inferential statistics. To test the hypotheses, independent 't' test was chi-square were used. The 0.05 level of significance was used to test the hypothesis.

- The researcher found that in experimental group 16(53.33%) were between the age group 15-16 years, while in control group 14(46.67%) were between the age group of 17-18 years.
- In experimental group 18(60%) were Hindu and in control group 23(76.67%) were Hindu.
- In experimental group 10(33.33%) were studying 10^{th} standard whereas in control group 18(60%) were studying 9^{th} standard.

- In experimental group 9(30%) of them attained menarche at less than 12 years and 9(30%) of them attained menarche in the age of 13-14 years. In control group 12(40%) of them attained menarche in the age 13-14 years.
- In experimental group 17(56.67%) of them had 4-5 days of menstrual cycle, whereas in control group 13(43.33%) of them had less than 3 days of menstrual cycle.
- In experimental group 11(36%) had pain during 1st and 2nd days of them menstrual cycle. In control group 9(30%) had pain during 1st day of their menstrual cycle.
- In experimental group 11(36%) had spasmodic pain and in control group 12(40%) had radiating pain and 12(40%) had colicky pain.
- In experimental group 19(63.33%) belonged to moderate level of dysmenorrhoea and 11(33.33%) belonged to severe level of dysmenorrhoea. In control group 9(30%) belonged to moderate level of dysmenorrhoea and 21(70%) belonged to severe level of dysmenorrhoea.
- In experimental group 19(63.33%) belonged to mild level of dysmenorrhoea, 11(36.67%) belonged to moderate level of dysmenorrhoea and none of them belonged to severe level of dysmenorrhoea.
- In control group 12(40%) belonged to moderate level of dysmenorrhoea and 18(60%) belonged to severe level of dysmenorrhoea.
- In the experimental group, the mean pre test score on dysmenorrhoea was 23.67±7.25, post test mean score was 15.03±4.93, with a difference 8.63. In the control group, the pre test mean score was 27.93±5.92 and post test mean score was 27.00±5.58 with a difference of 0.93. The mean difference in

experimental group shows that mint paste has reduced dysmenorrhoea among adolescent girls in experimental group.

- In the experimental group the post test mean score of dysmenorrhoea was 15.03±.4.93 and in the control group, the post test mean score was 27.00±5.58. The 't' value was 8.80, which shows that mint paste was effective in reducing dysmenorrhoea among adolescents girls in experimental group. Hence the formulated hypothesis H_1 was retained at $P<0.05$ level.
- In experimental and control group, there was no significant association between the pre test level of dysmenorrhoea and their selected demographic variables. Hence the formulated hypothesis H_2 was rejected at $P>0.05$ level.

Conclusion:

This study was done to assess the effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected schools, Salem. The result of this study showed that mint paste was effective in reducing dysmenorrhoea among adolescent girls. In experimental group there was no significant association between the pretest level of dysmenorrhoea and their selected demographic variables like age, religion, education, age at menarche, duration of menstrual flow, duration of pain and type of pain.

Implications:

Dysmenorrhoea is one of the commonest gynecological disorders affecting women in the reproductive age group. Hence, there is a need to have appropriate management for dysmenorrhoea. The result of the study proved that mint paste can be used effectively in the management of dysmenorrhoea.

Nursing Service:

- It emphasizes more on self care rather than allowing samples and their families to become dependent on health care personnel.
- There is a need for integration of the indigenous systems of medicine into the general health care services.
- In service education can be provided to the peripheral level health workers and train them on the alternative therapies available.
- All the adolescent girls with dysmenorrhoea can be taught about the importance of management of dysmenorrhoea.
- All the adolescent girls with dysmenorrhoea can be taught about the advantages of mint paste in the management of dysmenorrhoea.
- All the adolescent girls with dysmenorrhoea can be taught the self preparation techniques and they can be made efficient to manage the dysmenorrhoea at their home setup itself.

Nursing Education:

- Nurse educators should emphasize the concept of adolescent girls and self care and encourages student. Nurses to appreciate the role of the nurse as an educator of the adolescent girls.
- Nurse educator should take initiative in organizing continuing education program for nurses on effectiveness of mint paste in management of dysmenorrhoea.
- The nursing curriculum needs to update the nursing students to make them be aware of all the recent researchers present in the field and implement them.

Nursing Administration:

- The nurse administrator coordinates her work along with the staffs, to encourage them to do selected alternative nursing measures like mint paste in the management of dysmenorrhoea.
- Nursing administrator should organize in service educational program to the staffs regarding the management of dysmenorrhoea.

Nursing Research:

- This study can be used as a baseline for future studies to build upon.
- Nursing research need to be done to find out various other innovative measures in the management of dysmenorrhoea.
- Research can be conducted on various populations at various settings.

Recommendations:

- A similar study can be done using large samples.
- A similar study can be undertaken by allotting more time on data collection.
- A comparative study can be done to determine the effectiveness of natural mint and other synthetic preparation of mint among experimental and control group of adolescent girls with dysmenorrhoea.
- A similar study can be done in rural and urban communities.
- A similar study can be done in urban schools.
- A similar study can be done among women's with various age groups.
- A comparative study can be done with pharmacological and non-pharmacological management to dysmenorrhoea.

Summary:

This chapter dealt with summary, conclusion, implication for nursing and recommendations.

BIBLIOGRAPHY

Books:

- Basavanthappa. B.T. (2001). *Nursing Research*. (1st edition). New Delhi: Jaypee Brother Publishers Ltd.
- Basavanthappa. B.T. (2006). *Textbook of midwifery and reproductive health nursing*. (7th edition). Jaypee Brother Publishers.
- Bobak, Lowdermilk and Perry, (1999). *Maternity Nursing*. (5th edition). Philadelphia: Mosby.
- Burns. N & Groove. (2001). *The practice of Nursing research*. (4th edition). Philadelphia: W.B. Saunders Company.
- Denise.F. Polit, Cheryl Tatano, Beck, (2002). *Nursing research principles and methods*. (7th edition). New York: Lippincott William and Wilkins Publication.
- Dutta, *Textbook of Gynaecology*, (5th edition). Kolkata, New Central Book agency.
- Emily slone MC Kenney, Susan Rowen James, (2005). *Maternal child Nursing.* (3rd edition). Saunders.
- Hofman.D. (1999). *The complete illustrated herbal*. Newyork: Barners & Noble Books.
- Judy Jacka, Pauline Macabe. (2001). *Complementary therapies in Nursing and midwifery*. (1st edition). Ausmed Publication.
- Kothari.C.R. (1900). *Research methodology*. (2nd edition). New Delhi: Jaypee Brothers.
- Marie Elizabeth. (2010). *Midwifery for Nurses*. (1st edition). New Delhi: Sathish Kumar Jain and produced by Vinod K. Jain for Publication

- Morlow.D, & Radding. B. (1999). *Textbook of pediatric nursing*. (6th edition). Philadelphia: W.B.Saunders Company.
- Panda. H, (2006). *Herbs cultivation and medicinal uses*. (2nd edition). New Delhi, National Institute of Industrial Research.
- Potter.A. Patricia and Perry G.Anne, (1991). *Basic nursing theory and practice*.. (2nd edition). New Delhi: Mosby Publications (P) Ltd.
- Sundar Rao, (1998). *An introduction to biostatistics*. (4th edition). New Delhi: Vegas Publications (P) Ltd.
- Weiss.R, (2000). Herbal medicine. (2nd edition). Thieme Medical Publication.

Journals:

- Abbaspourh, Rostamin. (2006). The effect of exercise on primary dysmenorrhoea. *Journal of Research Health Science*, 6(1), 26-31.
- Adeyemia AS, Adekanle DA. (2007). Management of dysmenorrhoea among medical student. *International Journal of Gynaecological Obstetrics*, 7, 1528-39.
- Akin.M., Price. W., Rodrignez. G, et.al., (2004). Continuous low level, topical heat wrap therapy as compared to acetamenephen for primary dysmenorrhoea. *Journal of Reproductive Medicine*, 49(9). 739-745.
- Anil.K.Agarwal. (2010). A study of dysmenorrhoea during menstruation in adolescent girls. *Indian Journal of community medicine*, 35(1), 159-164.
- Anitha Singh, Dukhukiran, et.al., (2008). A problem related to menstruation among first and second year female medical student. *Indian Journal physiology, pharmacology*, 52(4), 389-397.

- Atchuta Kameswararao Avasarala, Saibharghavi Panchangam. (2008) Dysmenorrhoea in different settings. *Indian Journal of community medicine*, (33(4), 246-249.
- Chen HM, Chen CH. (2004). Effects of acupressure at the sanjinjiao point on primary dysmenorrhoea. *Journal of advanced nursing*, 48(4), 380-387.
- Choi. P.Y and Salmon.P. (1995). Symptom changes across the menstrual cycle in competitive sports women, exercises and sedentary women. *British Journal of Clinical psychology*, 34(3), 447-460.
- Damely. S.E, Torry. S. and Desjardins, P.J. (2005). Valdecoxes for treatment of primary dysmenorrhoea. *Journal of General Internal Medicine*, 20(1), 62-67.
- Deng Y, Guo ZG, Zeng ZL, Wang Z. (2002). Studies on the pharmacological effects of saffcon. *China Journal of Chinese maternal medicine*, 27, 565-8.
- Dr.K.M.Nadkarni's. (1989). *Indian materia media*. Volume – 1.
- Edwards. J.E, Moore R.A, & Mcquay. H.J. (2004). Rofexoab for dysmenorrhoea. *BMC Women's Health*, 4(1), 5.
- El.Gilany AH, Badawik, El-Fedaney S. (2005). Epidemiology of dysmenorrhoea. *East Meditar Health Journal*, 11, 115-63.
- Frank Tu. (2007) International association for the study of pain, 15(8), 1087 – 707
- Katharine O;Connell. (2006). *Journal of pediatric and adolescent gynecology*, 19(4), 285-289.
- Khodakrami Nahid, Moater Fariborth. (2009). The effect of an Iranian herbal drug on primary dysmenorrhoea. *Journal of midwifery and women's health*, 59, 401-404.

- Mansour.D, Korver.T, Marintcheva-Petrova.M, & Fraser.I.S. (2008). The effects of imbalance on menstrual bleeding patterns. *European Journal of contraception and reproductive health care*, 13, 13-28.
- Maryam Kabirian Zahra Abedian, (2011). Self management in primary dysmenorrhoea towards evidence based education. *Life Science Journal*, 8(2), 13-18.
- Metheny W, Smith R. (1989). The relationship among exercise, stress and primary dysmenorrhoea behave. *Journal of medicine*, 12, 569-86.
- Modauess. N.V & Asadipoue.M. (2006). Comparison of the effectiveness of fennel and mefenamic acid on pain intensity in dysmenorrhoea. *Eastern Mediteranean health Journal*, 12(3-4), 423-427.
- Nair P., Grover VL, Kannan A.J. (2007). Awareness and practices of menstruation and pubertal changes amongst unmarried female adolescents in rural area of East Delhi. *Indian Journal of community medicine*, 32, 156-57.
- Ortiz.M, (2010). Primary dysmenorrhoea among Mexican University students. *European Journal of Obstetrics and Gynaecology Reproductive*, 152(1), 73-7.
- Patel.V, et.al., (2006). The burden and determinants of dysmenorrhoea. *BJOG an International Journal of obstetrics and Gynaecology*, 113, 453 - 463.
- Proctor.M and Farquhae. (2006). Diagnosis and management of dysmenorrhoea. *British Medical Journal*, 332(7550), 1134-1138.
- Romana Dmitraric, et.al., (2003). Severity of symptoms in primary dysmenorrhoea – a doppler study. *European Journal of obstetric and Gynaecology and Reproductive Biology*, 107(2), 191-194.

- Sampalis.F, Bunea.R, Pelland. M.F, et.al., (2003). Evaluation of the effects of nepture krill oil on the management of premenstrual syndrome and dysmenorrhoea. *Alternative medicine review*, 8(2), 171-179.
- Spirling LI, Daniels IR.(2001). *Journal of Research Science*, 121(1), 62-63.
- Strinic.T, et.al. (2003). Anthropologial and clinical charactertistics of adolescent women with dysmenorrhoea. U.S. *National Library of Medicine National Institute of Health*, 27(2), 707-11.
- Svetlana Uladislavovna, et.al., (2007). Effect of a psidii guajavae folium extract in the treatment of primary dysmenorrhoea. *Journal of Ethnopharmacology*, 110(2), 305-310.
- Weissmen AM, Harth AJ, Hansen MD, Johnsen SR. (2004). The natural history of primary dysmenorrhoea. *A Longitudinal Study, BJOG*, 111, 345-352.
- Ying-Fen.T.Seng, Chung – Hey Chen, Yi-Hsin Yang. (2010). Rose Tea for relief of primary dysmenorrhoea in adolescents. *The Journal of midwifery and women's Health*, 50(5), e51- e57.
- Zhang.W.Y, & Li Wan Po. A. (1998). Efficacy of minor analgesics in primary dysmenorrhoea. *British Journal of Obstetrics and Gynaecology*, 105(7), 780-789.
- Ziari.S, Zakeri.M, and Kazemnejad.A, (2005). A randomized controlled trial of Vitamin E in the treatment of primary dysmenorrhoea. *British Journal of Obstetrics and Gynaecology*, 112(4), 466-469.

Unpublished Theses:

- Lakshmi. (2007). Effectiveness of pelvic rocking exercise upon dysmenorrhoea among school girls in Erode district.

- Beulah Queen, (2010), "Effectiveness of mint leaves paste upon dysmenorrhoea among the students at R.T.M.L.Ms Higher Secondary School, Venkanji at Kanyakumari.
- Ramya.M, (2008), "Effectiveness of mint extract upon dysmenorrhoea among the students at Apollo school of nursing, Chennai".
- Christina John, 92007). A study of menstrual problems in adolescent girls. Retrieved on 28.7.11 from www.imakmj.com
- Giti Ozgoli. (2007). Comparison of effect of ginger, mefenamic acid, and ibuprofen on pain in women with primary dysmenorrhoea. Retrieved on 2009, Feb 13 from Alteen complement med, PMID : 19216660.
- htpp://buyperiodpainrelief.com/natural-remedies-to-alleviateperiodcramps

Net References:

- Christina John, 92007). A study of menstrual problems in adolescent girls. Retrieved on 28.7.11 from www.imakmj.com
- Giti Ozgoli. (2007). Comparison of effect of ginger, mefenamic acid, and ibuprofen on pain in women with primary dysmenorrhoea. Retrieved on 2009, Feb 13 from Alteen complement med, PMID : 19216660.
- Julia. (2011). Cure dysmenorrhoea with these simple tips. Retrieved on 27.7.11 from file://h:howtotreatdysmenorrhoeanaturally-naturalremedies for dysmenorrhoea.
- Kariman. et.al., (2005). The effect of menastil on primary dysmenorrhoea. Retrieved on 13.2.11 from back to browse issue page 2(3), 177-184.
- Strinic.T, et.al., (2003). Anthropological and clinical characteristics in adolescent women with dysmenorrhoea. Retrieved on 21.7.11 from http://www.ncbi.nlm.nih.gov/pubmed/14746162

- William Cameron Chumlea, et.al., (2003). Age at menarche and racial comparisons in US Girls. Retrieved 29.07.11 from http://www.pediatricsdigist.mebi(content)
- Yang.H, et.al., (2008). Systematic review of clinical trials of acupuncture related therapies for primary dysmenorrhoea. Retrieved on 27.7.11 from http://www.ncbi.nlm.nih.gov/pubmed/18951224.
- Zhongguozhen Jiu. (2010). Efficacy observation of primay dysmenorrhoea treated with isolated – herbal moxibustion on shenque (V8). Retrieved on 25.6.11 from PMID:20578380 (Pubmed indexed for Medline).

ANNEXURE – A

LETTER SEEKING PERMISSION TO CONDUCT RESEARCH STUDY

From

Ms.PRIYA.T
M.Sc (N) II Year,
Sri Gokulam College of Nursing,
Salem.

To

The Principal,
Sri Gokulam College of Nursing,
Salem.

Respected Madam,

Sub: Permission to conduct research project – reg.

I **Ms.PRIYA.T.** II Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing, is conducting a research project in partial fulfilment of the TamilNadu Dr.M.G.R. Medical University, Chennai as a part of the requirement for the award of M.Sc(Nursing) Degree.

Topic: "A study to assess the effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected schools, Salem".

I request you to kindly do the needful.

Thanking you,

Yours obediently,

Place : Salem
Date :

(PRIYA.T)

ANNEXURE – B

LETTER GRANTING PERMISSION TO CONDUCT RESEARCH STUDY

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date : .....

LETTER REQUESTING PERMISSION TO CONDUCT A RESEARCH PROJECT

To

The Chief Education Officer,
Salem.

Respected Sir/ Madam,

Sub: Permission to conduct research project - Reg.

This is to introduce **Ms.PRIYA.T**, Final Year M.Sc. (Nursing) student of Sri Gokulam College of Nursing. She is to conduct a research project which is to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai in partial fulfillment of University requirement for the award of M.Sc., (Nursing) Degree.

Topic: "A study to assess the Effectiveness of Mint paste on Dysmenorrhea among Adolescents Girls in selected Schools, Salem".

Kindly permit to conduct the research project in Government Higher Secondary School, Kondalampatti and Government Higher Secondary School,**Mettupatti**,Salem from 13.07.2011 to 07.08.2011 with adherence to the Institutional Policies and regulations.

Thanking you

Place: Salem

Date :12-7-11

Yours Sincerely,

(Dr.Jayasudha)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

ANNEXURE - C

LETTER REQUESTING OPINION AND SUGGESTIONS OF EXPERTS FOR CONTENT VALIDITY OF THE RESEARCH TOOL

From

Ms.Priya.T,
Final Year M.Sc., (N)
Sri Gokulam College of Nursing,
Salem, Tamil Nadu.

To,

Respected Sir/ Madam,

Sub: Requesting opinion and suggestions of experts for establishing content validity of the tools.

I, **Ms**.**Priya.T**, a Final Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing, Salem. I have selected the topic mentioned below for the research project to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai for the partial fulfilment of Master's Degree in Nursing.

Topic: "A study to assess the effectiveness of mint paste on dysmenorrhoea among adolescent girls at selected schools, Salem.".

I wish to request you kindly validate the tool and give your expert opinion for necessary modification. I will be grateful to you for this.

Thanking you

Yours sincerely,

Place : Salem

Date : **(Ms**.**Priya.T)**

Enclosed:

1. Certificate of validation
2. Criteria checklist of evaluation of tool
3. Tool for collection of data
4. Procedure

ANNEXURE – D

TOOL

SECTION –A: DEMOGRAPHIC VARIABLES

Biographic variables

1. Age in years

a. 13 – 14 ☐

b. 15 – 16 ☐

c. 17 – 18 ☐

2. Religion

a. Hindu ☐

b. Muslim ☐

c. Christian ☐

3. Educational status

a. 9^{th} std ☐

b. 10^{th} std ☐

c. 11^{th} std ☐

d. 12^{th} std ☐

Menstrual Related Variables

4. Age at menarche (in years)

a. less than 12 year ☐

b. 13 – 14 ☐

c. 15 – 16 ☐

d. 17 – 18 ☐

5. Duration of menstrual flow per month

a. Less than 3 days ☐

b. 4 – 5 days ☐

c. 6 – 7 days ☐

6. Duration of pain

a. One day before menstruation ☐

b. 1st day ☐

c. 1st and 2nd day ☐

d. Throughout the menstruation ☐

7. Type of pain

a. Radiating pain ☐

b. Colicky Pain ☐

c. Spasmodic pain ☐

SECTION – B

DYSMENORREA RATING SCALE

S.No	Description	Almost Never 1	Rarely 2	Most Often 3	Always 4
	PHYSIOLOGICAL SYMPTOMS				
1	vomiting				
2	Loss of appetite				
3	Backache radiating to mid thigh				
4	Stiffness in the muscular joints				
5	Lower abdominal colicky pain				
6	Backache				
7	Headache				
8	Fatigue				
9	Body Pain				
10	Increase body temperature				

பிரிவு - அ

அடிப்படை விபரங்களை அறியும் நேர்காணல் படிவம்

குறிப்பு:

ஆராய்ச்சியாளர் பின்வரும் அனைத்து தகவல்களையும் பங்கேற்பவர்களிடமிருந்து சேகரித்து (✓) என்ற குறியை மிகவும் பொருத்தமானவைகளுக்கு எதிரேயுள்ள கட்டத்தில் இடுவார்.

தேதி: .....

பங்கேற்பவர் எண்: .....

அடிப்படை காரணிகள்

1. வயது வருடங்களில்

   அ) 13 - 14

   ஆ) 15 - 16

   இ) 17 - 18

2. மதம்

   அ) இந்து

   ஆ) இஸ்லாமியர்

   இ) கிறிஸ்துவர்

3. கல்வித்தகுதி (வகுப்பு)

   அ) 9 ஆம் வகுப்பு

   ஆ) 10 ஆம் வகுப்பு

   இ) 11 ஆம் வகுப்பு

   ஈ) 12 ஆம் வகுப்பு

மாதவிடாய் சார்ந்த காரணிகள்

4. பருவமடைந்த வயது

   அ) 12 வயதுக்குள்

   ஆ) 13 - 14 வயதுக்குள்

   இ) 15 - 16 வயதுக்குள்

   ஈ) 17- 18 வயதுக்குள்

5. எத்தனை நாள் மாதவிடாய் உதிரபோக்கு ஒரு மாதத்திற்கு ஏற்படும்

   அ) மூன்று நாட்களுக்குள்

   ஆ) நான்கு மற்றும் ஐந்து நாட்கள்

   இ) ஆறு மற்றும் ஏழு நாட்கள்

6. எவ்வளவு நாட்களாக வலி இருக்கும்?

   அ) மாதவிடாய் வருவதற்கு ஒரு நாள் முன்பே வரும்

   ஆ) முதல் நாள் மட்டும்

   இ) முதல் நாள் மற்றும் இரண்டாவது நாள்

   ஈ) மாதவிடாய் ஆரம்பம் முதல் முடியும் வரை

7. எம்மாதிரியான வலியை நீங்கள் மாதவிடாயின் போது உணர்வீர்கள்.

   அ) ஓரிடத்தில் பரவுதல் போன்ற வலி

   ஆ) குத்துதல் போன்ற வலி

   இ) முறுக்குதல் போன்ற வலி

பிரிவு - ஆ

மாதவிடாய் போது ஏற்படும் வலியின் அறிகுறிகளை கண்டறியும் படிவம்

வ. எண்	உடல் ரீதியான அறிகுறிகள்	பெரும்பாலும் இல்லை (1)	எப்பொழுதாவது (2)	அடிக்கடி (3)	எப்பொழுதும் (4)
1.	வாந்தி				
2.	பசியின்மை				
3.	தொடையை நோக்கி வலி பரவுதல்				
4.	தசைப்பிடிப்பு				
5.	அடிவயிற்றில் குத்துதல் போன்ற வலி				
6.	முதுகுவலி				
7.	தலைவலி				
8.	மனச்சோர்வு				
9.	உடம்புவலி				
10.	உடலில் வெப்பநிலை அதிகமாதல்				

PREPARATION OF MINT PASTE

Introduction :

Mint is a popular green leafy vegetation used in cooking for given pleasant taste and also used as aromatic properties. Mint has been used in medicine since last 2000 years. Now it has been used in the treatment of various diseases.

Purpose:

1. To relieve muscle spasm
2. To reduce the menstrual pain.

Ingredients:

1. Mint powder 5 grams
2. Salt 1 pinch
3. Tamarind 1 piece

Mechanism of Action

Anti spasmodic and analgesic

- Menstrual cramps are brought to you by prostaglandins which are hormone like chemical, which force uterine muscles to contract and cause pain.
- Mint paste helps in balancing the muscle relaxation during menstrual cramp.

Preparation of Mint Paste

It refers to the mint leaves are taken from the plant, dried under shadow and powdered. Take 5 grams of mint powder along with 1 pinch of pure salt and 1 bit of seedless tamarind which all mixed together in shape of a small ball and have to be administered twice a day for 7 days (4 days prior to menstrual period and continued till 3 days during menstruation).

Intervention:

- Identify the adolescent girls with dysmenorrhoea.
- Explain the benefit of mint on dysmenorrhoea
- Win the confidence and cooperation
- Prepare the mint paste with all the ingredients.
- Administer mint paste 4 days before and during menstruation, two times a day that is morning and evening.
- Record the completion of procedure.
- Evaluate the effectiveness of mint paste by assess the level of dysmenorrhoe.

ANNEXURE– E

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms**.**Priya.T**, Final year M.Sc. Nursing student of Sri Gokulam College of Nursing, Salem (affiliated to Dr. M.G.R. Medical University) is validated and can proceed with this tool and content for the main study entitled **"A Study To Assess The Effectiveness Of Mint Paste On Dysmenorrhoea Among Adolescent Girls At Selected Schools, Salem."**

Signature with Date

ANNEXURE - F

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr. P. Chellammal, M.D., D.G.O.,**
   Consultant, Obstetrician and Gynecologist,
   Sri Gokulam Hospital,
   Salem.

2. **Dr. G.Prakash, M.D.,**
   Consultant community medicine
   Sri Gokulam Hospital,
   Salem.

3. **Dr.S.Sridhar, B.S.M.S, M.Sc., Ph.D.,**
   Siddha Medicine,
   Herbal Health Consultant,
   Salem.

4. **Mrs. Nalini, M.Sc.(N),**
   Professor,
   Obstetrical and Gynaecological Nursing,
   Sri Gokulam College of Nursing,
   Salem.

5. **Mrs. J.Kamini Charles, M.Sc.(N), Ph.D.,**
   Associate Professor, Head of the dept,
   Community Health Nursing,
   Sri Gokulam College of Nursing,
   Salem.

6. **Mrs.Malathy, M.Sc.(N),**
   Associate Professor,
   Community Health Nursing,
   Vinayaka Mission Annapoorna College of Nursing,

7. **Mrs.Akila, M.sc.(N),**
   Associate Professor,
   Community health nursing,
   Vivekananda college of nursing.

8. **Mrs. Sheela Theres , M.Sc (N).,**
   Assistant Professor,
   Sri Gokulam College of Nursing,
   Salem.

ANNEXURE -G

CERTIFICATE OF EDITING

Certified that the dissertation paper titled **"A Study To Assess The Effectiveness Of Mint Paste On Dysmenorrhoea Among Adolescent Girls At Selected Schools, Salem."** by **Ms.Priya.T,** has been checked for accuracy and correctness of English language usage, and that the language used in presenting the paper is lucid, unambiguous, free of grammatical / spelling errors and apt for the purpose.

WINGS ®
ENGLISH ACADEMY
1,2,3, IInd Floor, Ratna Complex,
Five Roads, [illegible]

Date :

Signature:

Name and designation:

ANNEXURE - H

PHOTOS